CORS & OPUS:
STATUS & FUTURE PROSPECTS
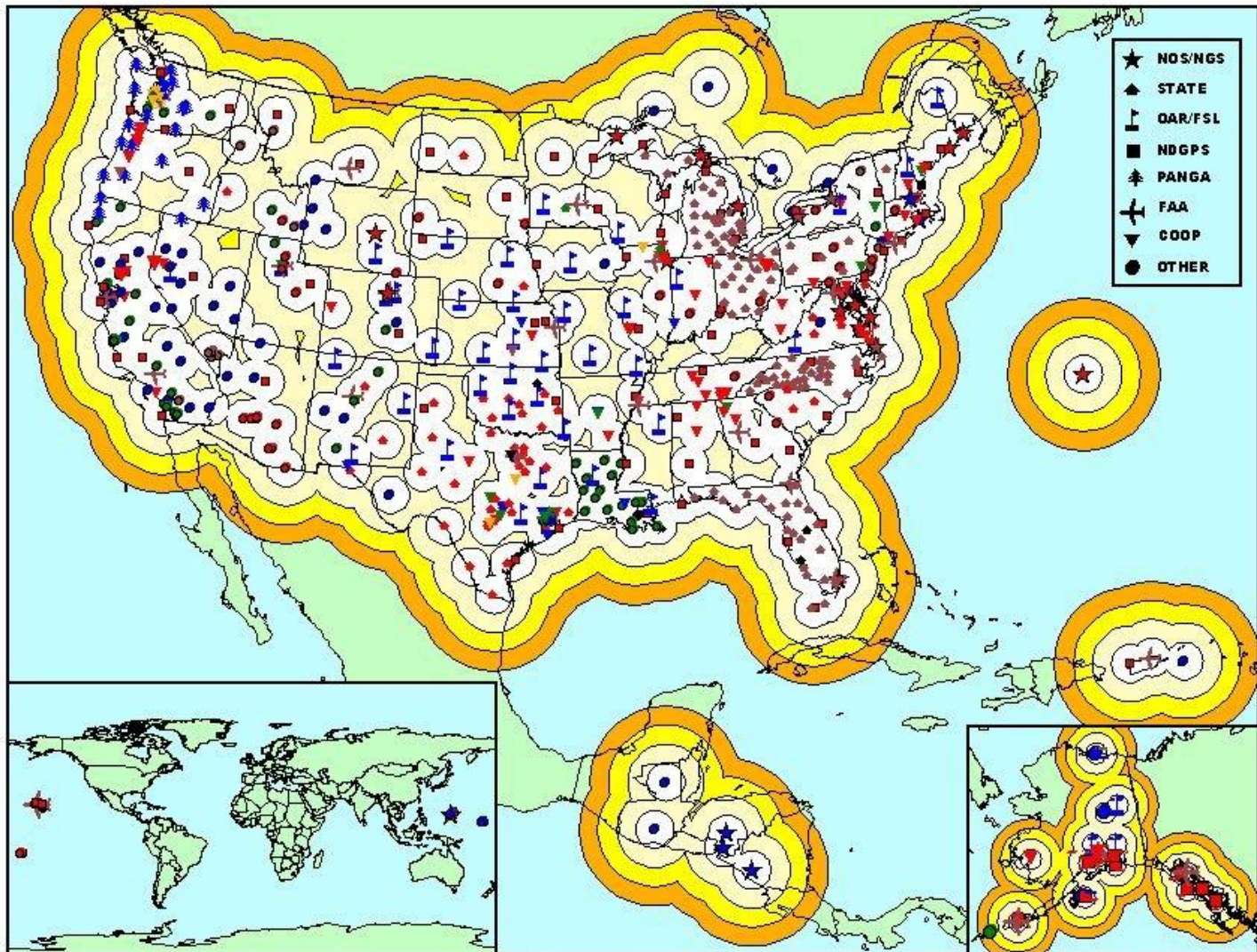
NOAA's National Geodetic Survey

ACSM Annual Conference

Orlando, FL

April 25, 2006

National Oceanic and Atmospheric Administration

Continuously Operating Reference Stations

CORS Coverage (100, 200, 300, and 400 km radius) January 2005

Symbol color denotes sampling rates: (1 second) (5 seconds) (10 seconds) (15 seconds) (30 seconds)

Craig 2/03/2005

OPUS

Online Positioning User Service

http://www.ngs.noaa.gov/OPUS/
opus@ngs.noaa.gov

AGENDA

- Introduction – Richard Snay

- OPUS in Mexico – Tom Soler

- Guidelines for New & Existing CORS – Giovanni Sella

- OPUS-DB – Joe Evjen & Rick Foote

- Towards Real Time – Neil Weston

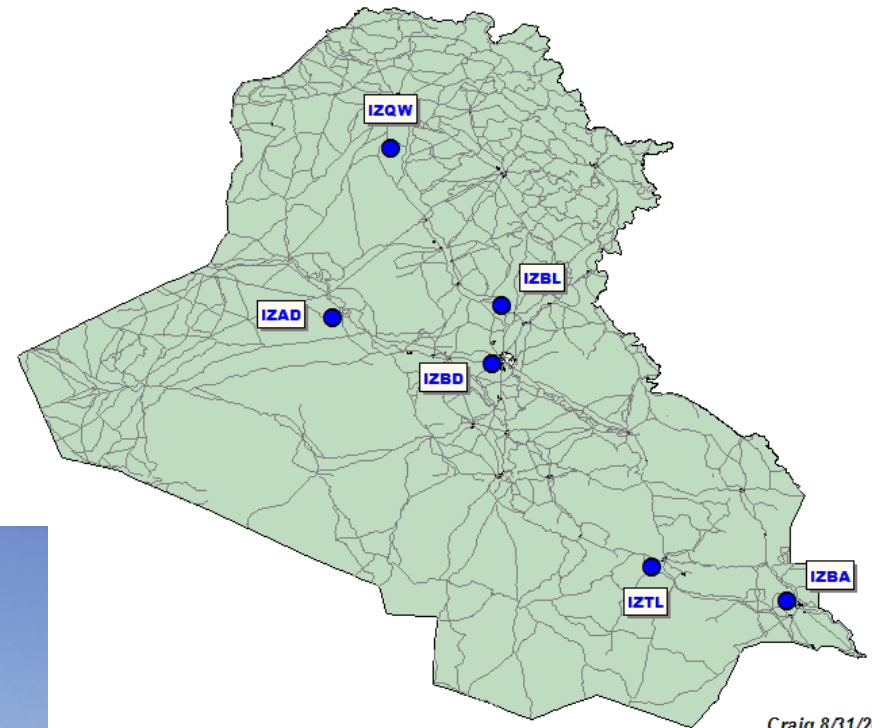National Oceanic and Atmospheric Administration

CORS OVERVIEW

- CORS Network contains 900+ sites

- CORS Network growing at rate of 15 sites per month

- More than 175 organizations participate in the CORS program

- Provides code range (C/A, P1, P2)

  - and carrier phase observations (L1, L2)

  - Expect to provide L2C code range in near future

CORS APPLICATIONS

- Postmission Static Positioning (cm-level accuracy with a few hours of data, dm-level accuracy with one minute of data)

- Postmission Kinematic Positioning (dm-level accuracy for an aircraft, boat, or land vehicle)

- Geophysics / Crustal Motion

- Meteorology / Water Vapor in Atmosphere

- Space Weather / Free Electrons in Ionosphere

CORS NETWORK NOW CONTAINS 6 IRAQI SITES

Craig 8/31/2005

Established by U.S. Army

Several CORS collected 1-second GPS data following Hurricanes Katrina and Rita to support airborne mapping of the recovery zones.